| Current Approver:       | n/a    | Copy To on Completion: n/a |
|-------------------------|--------|----------------------------|
| Current Status:         | Issued | Next Status: n/a           |
| Approval Required From: | All    |                            |

# Burnside Incident Investigation Report (for Internal Use Only)

Created by Thomas Miller On 05/25/2012

| Incident Information (Link to S3Y)   |  |   |   |
|--|--|---|---|
| Incident Number:   | 12-0020-R  | >1  | *************************************** |
| Title:   | Gas Leak o                                       | n the HIP Heat Exchanger  |   |
| Incident Date:<br>(if applicable)  | 05/24/2012                                       | Incident Time:  | 09:30<br>PM                             |
| Date of first awareness / initial DuPont contact<br>/notified of Incident: | 05/24/2012                                       | Time of first awareness / initial DuPont contact / notified of Incident:  | 09:30<br>PM                             |
| Date Investigation Began   | 05/24/2012                                       | Time Investigation Began  | 09:30<br>PM                             |
| Business/Unit:   | Burnside   | Area:   | Acid<br>Plant                           |
| Brief Description of known facts:  | While makir<br>hoes above                        | ig Homeland security check gas leak was noticed coming the HIP.   | off the                                 |
| Immediate Action Taken:  | 2. Reduce  | supervision<br>sulfur burden in order to reduce pressure across the heat<br>s short shutdown to make weld repair to HIP   | exchange                                |
| Type of Incident :<br>(Select all that apply)                              |  | Table 19 The Control of the Control |   |
| Was there Potential for an On-Job Injury / Illness                         | ***************************************          | No  |   |
| Was there an On-Job Injury / Illness ( <u>Link to S35G)</u>                | managaran da | No  |   |
| Operation status at time of incident                                       |  | Normal Operation / Activity   |   |
| Incident Recommendation - PREFIX:  |  | INE - Incident - Environmental  | *************************************** |

| Environmental and / or Process Safet                                    | y  |  |
|---|--|--|
| Type of Environmental / Process Incident (Select all that apply)        | de financia de la composición dela composición de la composición dela composición de la composición de | Release of Materials   |
| Area PSM Classification   |  | ННР  |
| Was there off-site impact?  |  | No   |
| Outside Notification Required?  | No<br>Release Reporting Guidelines   | Names of Outside Agencies Notified   |
| Release - UNITS of Weight Measure:                                      |  | Lbs  |
| Amount Released out of Primary containment                              | 0.291  | Duration (Mins.) 60  |
| Was release contained?  |  | Continue to the Continue of th |
| Amount Released out of Secondary Containment (Decimal Symbol to be ".") | 0.22   | To what medium? Air  |
| HTM Chemicals Released (Select All That Apply)                          |  |  |
| Chemicals Released (other than HTM)                                     |  | sulfur dioxide   |
| Were any people exposed to the chemicals?                               |  | No   |



#### Instructions

2009 ACC Reportable Quantities:

An acute release of flammable, combustible, or toxic chemical from primary containment. Release measured in 1-hr blocks.

> Hydrogen Sulfide 55 lbs Sulfur dioxide 220 lbs Sulfur trioxide, stabilized 55 lbs Sulfuric Acid, fuming (≥30% oleum) 55 lbs Sulfuric Acid, furning (<30% oleum) 1100 lbs

Sulfuric Acid 2200 lbs

Sodium Hydroxide solution (all strengths): 2200 lbs

Nitrosylsulfuric acid 2200 lbs

Hydrogen Peroxide (>40% - <60%) 2200 lbs

#### Incident Report Quality Assurance questions.

These questions are to be reviewed and anwered for each incident that is being authorized.

| r                                       | }=====================================  | r  | 8∞   | 1 |
|---|---|----|------|---|
| PHA Area                                | Acid Plant                              |    | -    |   |
| *************************************** | *************************************** | ~~ | **** | ì |

8. Actual off-site impact 0

| ENVIRONMENT F  | RATING (* Indicates an automatic Category A Incident)   | Po | ints |
|--|---|----|------|
| Hazards and materials involved   | a. Highly toxic materials (HTM)   | T  | 20   |
| 2. Actual Size of release, incident or magnitude of event  | f. Very small - Release <0.45 kg (<1 lb) of highly toxic materials (listed in DuPont SHE Standard S23A). Other comparable substances may be designated by region or business. A "Very small" release refers to a drip or an instantaneous release (e.g., a "puff").                         |    | 0    |
| 6. Actual on-site Impact   |   |    | 0    |
| 6(1). Evacuation - Due to the presence of<br>hazardous conditions  | c. Precautionary evacuation or no evacuation  | 0  |      |
| 6(2). Shelter-in-place - Due to the presence of hazardous conditions   | c. Precautionary shelter-in-place or no shelter-in-place  | 0  |      |
| 6(4). Process shutdown - Due to the presence<br>of hazardous conditions as a result of the<br>incident   | d. Nonemergency shutdown due to very small drips or puffs that are localized at the source only and where very minimal or no production impact occurs. Note - Discretionary / nonemergency shutdowns that are taken consistent with a site's zero-leak philosophy should be scored 0 points | 0  |      |
| 6(6). Damage to property (e.g groundwater /<br>sediment / surface water / soil / or soil cover<br>([e.g aggregate and shell]) contamination)                                     | c. No impact to soil / surface water / or groundwater or release limited to surface soil or water that is readily remediated by plant personnel as part of the initial response to the incident   | 0  |      |
| 6(7). Damage to wildlife (e.g deer / birds / or<br>small animals) - aquatic life (e.g. fish / turtles /<br>crags / or frogs) - or vegetation (e.g. trees /<br>bushes / or grass) | c. No impact or slight reversible impact to vegetation (e.g. brown grass or damage<br>to tree leaves) aquatic life or wildlife in the area of the event only  | 0  |      |
| 8. Actual off-site impact  |   |    | 0    |
| 8(1). Evacuation   | c. No evacuation  | 0  |      |

| 8(2). Shelter-in-place   | c. No precautionary or nonprecautionary shelter-in-place  | 0   | · [     |
|--|---|-----|---------|
| 8(3). Injury   | b. None   | - 0 | -       |
| 8(4). Media Coverage   | d. None   | 0   | -       |
| 8(5). Damage to property (e.g groundwater /<br>sediment / surface water / soil / or soil cover<br>([e.g aggregate and shell]) contamination)                                     | c. None   | 0   |         |
| 8(6). Damage to wildlife (e.g deer / birds / or<br>small animals) - aquatic life (e.g. fish / turtles /<br>crags / or frogs) - or vegetation (e.g. trees /<br>bushes / or grass) | c. None   | 0   |         |
| 8(7). Community impact   | d. None   | 0   | · [     |
| 8(8). Outside agency emergency response  | b. No notification - involvement - or outside agency responders notified and on standby or observing with no active involvement in emergency response | 0   | :       |
| 8(9). Government and external reporting  | c. Precautionary, courtesy, or no reporting   | 0   | <u></u> |
| 8(10). Government response   | c. None   | 0   |         |
|  |   | T   | 20      |
|  | Environment Rating: C   |     | -       |

| 6. | Actual | on-site  | Impact | 0 |
|----|--------|----------|--------|---|
| 8. | Actual | off-site | impact | 0 |

| 6. | Actual | on-site  | Impact | $\prod$ | 0 |
|----|--------|----------|--------|---------|---|
| 8. | Actual | off-site | impact | [ ]     | 0 |

| Incident Type   | Rating (A, B, C)     | Rating | Number |
|-----------------|----------------------|--------|--------|
|                 | (Link to S8Y)        |        |        |
| Environmental   |                      |        |        |
| POTENTIAL ON-JO | B INJURY             |        |        |
| POTENTIAL On-   | Job Injury / Illness |        |        |

| Determination of Investigation Requirements  Is this a repeat incident?  | Ye |
|--|----|
| Do you expect that Mechanical Integrity (MI) and/or Quality Assurance (QA) will be significant key factors or contributors t | 1  |
| this incident?   | 1  |
| this incident?   |    |
| this incident?  Is Further / Full Investigation of this incident recommended / required ?                                    |    |

| "One-Pager" Communication  | on in the second se              |
|--|---|
| Is a "One-Pager" to be prepared?   | No  |
| Preliminary One-Pager Suggested:<br>All Event Related Injuries<br>All Category A, B Incidents<br>Near Miss Incidents (>LWC)<br>Other type with important learnings | Final One-Pager Suggested: All Event Related LWC All Category A, B Incidents Other type with important additional learnings |

## MitC - INC (Incident Notification Communication) / ITS Transfer Status Transfer enabled By: Kerry Long/AE/DuPont On: 05/25/2012

| Enviror          | mental and / or P              | rocess Safety                                 |   |  |
|------------------|--------------------------------|---|---|--|
| Primary eq       | uipment involved               |   | Pipelines & Fittings                            |  |
| Units of m       | aterial released quantit       |   |   |  |
| Material<br>Type | Name of Chemical /<br>Material | Amount Released out of<br>Primary containment | Amount Released out of<br>Secondary Containment | Released out of Secondary Containment to:  |
| Gases -<br>oxic  | SO2 and SO3                    |   |   | Air  |
| SM Incide        | nt Cost Calculator             |   |   |  |
| roperty D        | amage cost (\$)                | jed.<br>Slavke si salikulara kanakaran sali   | \$0   |  |
| invironme        | ntal Damage cost (\$)          |   | \$0   | The state of the s |
| Business Ir      | nterruption cost (\$)          |   | \$0   |  |
| Other Cost       | t <b>(\$)</b>                  |   | \$0   |  |
| otal Cost        | (\$)                           |   | \$0   |  |

### **Associated CAR's**

| Email will go to the default distribution list. |     |  |  |  |  |  |  |  |
|---|-----|--|--|--|--|--|--|--|
| Preliminary:                                    | n/a |  |  |  |  |  |  |  |
| Issue &   | n/a |  |  |  |  |  |  |  |
| Rated:  |     |  |  |  |  |  |  |  |

|    | Final:                        | SPEC~Sulfur~~Burnside~Authors; Brian E Bentley/AE/DuPont; Raymond G Allen/AE/DuPont; Rob M Brown/AE/DuPont;  |  |  |  |  |  |  |
|----|-------------------------------|--|--|--|--|--|--|--|
|    | SPEC~Sulfur~~Burnside~Editors |  |  |  |  |  |  |  |
| >~ | ·····                         | The state of the s |  |  |  |  |  |  |

List any names for off-site notification List any additional names below for the Final Report:

| Workflow / Status |                         | Approver/<br>Completed By:                       | Upon Completion -<br>Copy Email to:  | Completed Date:                          | Approval Required From: |  |  |  |  |
|-------------------|-------------------------|--|--|--|-------------------------|--|--|--|--|
| DRAFT/NEW         |                         |  |  |  |                         |  |  |  |  |
| 0                 | Draft                   | Author<br>Thomas Miller                          |  | 05/25/2012                               | AII                     |  |  |  |  |
| IN-PROGRESS       |                         |  | and the second s |  |                         |  |  |  |  |
| 1                 | Rate Incident           | Maintenance, Environmental Manager<br>Kerry Long | ·  | 05/25/2012                               | Any One                 |  |  |  |  |
| 2                 | Approve Rating          | Plant Manager<br>Thomas Miller/CL/DuPont         |  |  | All                     |  |  |  |  |
| 3                 | Formal Investigation    | Incident Lead<br>Investigation Leader            | p*************************************   | 2-4070-000000000000000000000000000000000 | All                     |  |  |  |  |
| 4                 | Submitted To Authorizer | Plant Manager<br>Kerry Long                      | Final  | 05/25/2012                               | All                     |  |  |  |  |
| COMPLETE          |                         |  | S. W. L. S.  |  |                         |  |  |  |  |
| 20                | Issued                  |  |  |  |                         |  |  |  |  |

## Status/Edit Tracking

Update History:

05/25/2012 : Thomas Miller : Status updated to Rate Incident 05/25/2012 : Kerry Long : Status updated to Submitted To Authorizer 05/25/2012 : Kerry Long for Thomas Miller : Status updated to Issued

Added as per PQR#11183829 - Lookup for PComplete11 to PComplete15

\*Only past five edits are shown